

Facility: <u>IP3</u>		Date of Examination: <u>3/10-13/03</u> <u>3/21/03</u>
Examinations Developed by: <u>Facility</u> / NRC (circle one)		
Target Date*	Task Description / Reference	Chief Examiner's Initials
-180	1. Examination administration date confirmed (C.1.a; C.2.a & b)	TF
-120	2. NRC examiners and facility contact assigned (C.1.d; C.2.e)	TF
-120	3. Facility contact briefed on security & other requirements (C.2.c)	TF
-120	4. Corporate notification letter sent (C.2.d)	TF
[-90]	[5. Reference material due (C.1.e; C.3.c)]	NA
-75	6. Integrated examination outline(s) due (C.1.e & f; C.3.d)	TF
-70	7. Examination outline(s) reviewed by NRC and feedback provided to facility licensee (C.2.h; C.3.e)	TF
-45	8. Proposed examinations, supporting documentation, and reference materials due (C.1.e, f, g & h; C.3.d)	TF
-30	9. Preliminary license applications due (C.1.i; C.2.g; ES-202)	TF
-14	10. Final license applications due and assignment sheet prepared (C.1.i; C.2.g; ES-202)	TF
-14	11. Examination approved by NRC supervisor for facility licensee review (C.2.h; C.3.f)	TF
-14	12. Examinations reviewed with facility licensee (C.1.j; C.2.f & h; C.3.g)	TF
-7	13. Written examinations and operating tests approved by NRC supervisor (C.2.i; C.3.h)	TF
-7	14. Final applications reviewed; assignment sheet updated; waiver letters sent (C.2.g, ES-204)	TF
-7	15. Proctoring/written exam administration guidelines reviewed with facility licensee and authorization granted to give written exams (if applicable) (C.3.k)	TF
-7	16. Approved scenarios, job performance measures, and questions distributed to NRC examiners (C.3.i)	TF
<p>* Target dates are keyed to the examination date identified in the corporate notification letter. They are for planning purposes and may be adjusted on a case-by-case basis in coordination with the facility licensee.</p> <p>[] Applies only to examinations prepared by the NRC.</p>		

Facility: Indian Point Unit 3		Date of Examination: 3/10/2003		
Item	Task Description	Initials		
		A	B	C
1. W R I T T E N	(a) Verify that the outline fits the appropriate model per ES-401	JG	JH	TF
	(b) Assess whether the outline was systematically and randomly prepared in accordance with section D.1 of ES-401 and whether all knowledge and ability categories are appropriately sampled	JG	JH	TF
	(c) Assess whether the outline overemphasizes any systems, evolutions, or generic topics	JG	JH	TF
	(d) Assess whether the justifications for deselected or rejected K/A statements are appropriate	JG	JH	TF
2. S I M	(a) Using form ES-301-5, verify that the proposed scenario sets cover the required number of normal evolutions, instrument and component failures, and major transients	JG	JH	TF
	(b) Assess whether there are enough scenario sets and spares to test the projected number and mix of applicants in accordance with the expected crew composition and rotation schedule without compromising exam integrity; ensure each applicant can be tested using at least one new scenario. Scenarios will not be repeated over successive days.	JG	JH	TF
	(c) To the extent possible, assess whether the outline conforms with the qualitative and quantitative criteria specified on Form ES-301-4 and described in Appendix D	JG	JH	TF
3. W T	(a) Verify that: (1) the outline contains the required number of control room and in-plant tasks (2) no more than 30% of the test material is repeated from the last NRC examination (3)* no tasks are duplicated from the applicant's audit test, and (4) no more than 80% of any operating test is taken directly from the licensee's exam banks	JG	JH	TF
	(b) Verify that: (1) the tasks are distributed among the safety function groupings as specified in ES-301 (2) one task is conducted in a low power or shutdown condition (3) 40% of the tasks require the candidate to implement an alternate path procedure* (4) one in-plant task tests the applicant's response to an emergency or abnormal condition (5) the in-plant walkthrough requires the applicant to enter the RCA	JG	JH	TF
	(c) Verify that the required administrative topics are covered, with emphasis on performance-based activities	JG	JH	TF
	(d) Determine if there are enough different outlines to test the projected number and mix of applicants and ensure that no items are duplicated on successive days.	JG	JH	TF
4. G E N E R A L	(a) Assess whether plant-specific priorities (including PRA and IPE insights) are covered in the appropriate exam section	JG	JH	TF
	(b) Assess whether the 10CFR55.41/43 and 55.45 sampling is appropriate	JG	JH	TF
	(c) Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5	JG	JH	TF
	(d) Check for duplication and overlap among exam sections	JG	JH	TF
	(e) Check the entire exam for balance of coverage	JG	JH	TF
	(f) Assess whether the exam fits the appropriate job level (RO or SRO)	JG	JH	TF
Printed Name/Signature		Date		
1. Author	JOSEPH G. ARSENAULT <i>Joseph Arsenault</i>	12/21/02		
2. Facility Reviewer (*)	STEPHEN P. JOUBERT <i>Stephen P. Joubert</i>	12/21/02		
3. Chief Examiner	TODD H. FISH <i>Todd H. Fish</i>	1/7/03		
4. NRC Supervisor	Richard J. Conte <i>Richard J. Conte</i>	1/24/03		
(*) Not applicable for NRC developed examinations				

*SRO outline shows 3; facility advised of this and will correct

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 3/10+17/03 as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC. Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of 3/10+17/03 From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
1. STEPHEN P JOUBEYLT	INSTRUCTOR/DEVELOPER	<i>[Signature]</i>	11/12/02	<i>[Signature]</i>	3/24/03	
2. W.S. ALTIC	SR INSTRUCTOR / DEVELOPER	<i>[Signature]</i>	11-13-02	<i>[Signature]</i>	3-24-03	
3. P. McWILLIAMS	SIM OPS SPECIALIST/SUPPORT	<i>[Signature]</i>	11/18/02	<i>[Signature]</i>	3/24/03	
4. GARY BROWN	SIMULATOR SOFTWARE SPEC	<i>[Signature]</i>	12/2/02	<i>[Signature]</i>	3/24/03	
5. Chris Cassidy	Reactor Operator	<i>[Signature]</i>	1/6/03	<i>[Signature]</i>	3/27/03	
6. AL SMALL	SHIFT MANAGER	<i>[Signature]</i>	1/6/03	<i>[Signature]</i>	3/27/03	
7. Jess Williams	Reactor Operator	<i>[Signature]</i>	1/6/03	<i>[Signature]</i>	3/27/03	
8. Dave Pittsley	CRS	<i>[Signature]</i>	1/6/03	<i>[Signature]</i>	3/27/03	
9. Steven J Bridges	Shift Manager	<i>[Signature]</i>	1/8/03	<i>[Signature]</i>	3/27/03	
10. E PATRULLO	INSTRUCTOR	<i>[Signature]</i>	1/17/03	<i>[Signature]</i>	3/25/03	
11. CHUAN-JEN SCHYU	SENIOR ENGINEER	<i>[Signature]</i>	1/17/03	<i>[Signature]</i>	3/25/03	
12. JOHN T GRAHAM	REACTOR OPERATOR	<i>[Signature]</i>	1/22/03	<i>[Signature]</i>	3/25/03	
13. CARL N. LEECH	REACTOR OPERATOR	<i>[Signature]</i>	1/22/03	<i>[Signature]</i>	3/25/03	
14. Tom Cramer	CRS / PSS	<i>[Signature]</i>	1/22/03	<i>[Signature]</i>	3/26/03	
15. Stephen Davis	Operations Training Supervisor	<i>[Signature]</i>	1/22/03	<i>[Signature]</i>	3/27/03	

NOTES:

ES-201

Examination Security Agreement

Form ES-201-3

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 3/17-3/24 as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC. Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of 3/17-3/24. From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE/NOTE
1. JOSEPH G. ARSENAULT	AUTHOR - CONSULTANT	<i>Joseph G. Arsenault</i>	1/14/02	SEE ATTACHED E-MAIL & PER TELEPHON	3/21/03
2. Jacqueline G. Scheikly	Holmes Technician	<i>Jacqueline G. Scheikly</i>	1/26/02	SEE ATTACHED E-MAIL	3/25/03
3. Jack Seaboldt	Shift Manager	<i>Jack Seaboldt</i>	1/22/03	<i>Jack Seaboldt</i>	3-27-03
4. Mike Cochrane	Reactor Engineer	<i>Michael Cochrane</i>	1/31/03		② 3/13/03
5. Frank Wilson	SUPV OPERATIONS TRAINING	<i>Frank Wilson</i>	2-10-03		3/24/03
6. DON VINCHOSKI	S.R. OPS TRAINER	<i>Don Vinchoski</i>	2-10-03	<i>Don Vinchoski</i>	3/25/03
7. ERNIE GURINA	SHIFT MANAGER	<i>Ernie Gurina</i>	2-27-03	<i>Ernie Gurina</i>	3-25-03
8. John E. Crachford	Instructor/Simulator Board	<i>John E. Crachford</i>	3/9/03	<i>John E. Crachford</i>	3/13/03 ①
9. JEFFREY NORTON	SIMULATOR HWWR SPECIALIST	<i>Jeffrey Norton</i>	3/11/03	<i>Jeffrey Norton</i>	3/24/03
10.					
11.					
12.					
13.					
14.					
15.					

NOTES: ① ACCESS TO OPERATING EXAM ONLY. HAS NEVER HAD ACCESS TO WRITTEN EXAM. 3/13/03
 ② M. COCHRANE NO LONGER EMPLOYED BY ENTERGY. 3/13/03.

Sites 3/6

Joubert, Stephen

From: joearsenault@nrcexam.com
Sent: Monday, March 24, 2003 5:06 PM
To: Joubert, Stephen; Altic, William
Subject: Fw: IP2 & 3 Security Agreement

Here is our Technical Assistant's e-mailed security agreement

----- Original Message -----

From: "Jacqueline Schelkly" <jschelkly@mail.com>
To: <joearsenault@nrcexam.com>
Sent: Monday, March 24, 2003 3:02 PM
Subject: IP2 & 3 Security Agreement

> To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the weeks of 3/10/2003 and 3/17/2003. From the date that I entered into this security agreement until completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these license examinations.

>

> Jacqueline Schelkly
> Western Technical Services

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>

> Sign-up for your own FREE Personalized E-mail at Mail.com
> <http://www.mail.com/?sr=signup>

>

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Joubert, Stephen

From: joearsenault@nrcexam.com

Sent: Monday, March 24, 2003 9:14 AM

To: Altic, William; Joubert, Stephen; jackieschelkly@nrcexam.com

Subject: IP2/IP3 Security Agreements

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the weeks of 3/10/2003 and 3/17/2003. From the date that I entered into this security agreement until completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these license examinations.

Joseph G. Arsenault
Western Technical Services, Inc.

3/24/2003

Facility: Indian Point Unit 3		Date of Examination: 3/17/2002		Operating Test Number: 1	
1. GENERAL CRITERIA		Initials			
		a	B*	C#	
a.	The operating test conforms to the previously approved outline; changes are consistent with sampling requirements (e.g., 10 CFR 55.45, operational importance, safety function distribution).	JBA	JF	TF	
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.	JBA	JF	TF	
c.	The operating test shall not duplicate items from the applicants' audit test(s)(see Section D.1.a).	JBA	JF	TF	
d.	Overlap with the written examination and between operating test categories is within acceptable limits.	JBA	JF	TF	
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.	JBA	JF	TF	
2. WALK-THROUGH (CATEGORY A & B) CRITERIA		--	--	--	
a.	Each JPM includes the following, as applicable: <ul style="list-style-type: none"> initial conditions initiating cues references and tools, including associated procedures validated time limits (average time allowed for completion) and specific designation if deemed to be time critical by the facility licensee specific performance criteria that include: <ul style="list-style-type: none"> detailed expected actions with exact criteria and nomenclature system response and other examiner cues statements describing important observations to be made by the applicant criteria for successful completion of the task identification of critical steps and their associated performance standards restrictions on the sequence of steps, if applicable 	JBA	JF	TF	
b.	The prescribed questions in Category A are predominantly open reference and meet the criteria in Attachment 1 of ES-301.	JBA	JF	TF	
c.	Repetition from operating tests used during the previous licensing examination is within acceptable limits (30% for the walk-through) and does not compromise test integrity.	JBA	JF	TF	
d.	At least 20 percent of the JPMs on each test are new or significantly modified.	JBA	JF	TF	
3. SIMULATOR (CATEGORY C) CRITERIA		--	--	--	
a.	The associated simulator operating tests (scenario sets) have been reviewed in accordance with Form ES-301-4 and a copy is attached.	JBA	JF	TF	
<div style="display: flex; justify-content: space-between;"> <div> <p>Printed Name / Signature</p> <p>a. Author <u>JOSEPH G. ARSENAULT</u></p> <p>b. Facility Reviewer(*) <u>STEPHEN P. JACOBSEN</u></p> <p>c. NRC Chief Examiner (#) <u>TODD FISH / Todd Fish</u></p> <p>d. NRC Supervisor <u>R.J. Cmte / [Signature]</u></p> </div> <div> <p>Date</p> <p><u>1/14/03</u></p> <p><u>1/24/03</u></p> <p><u>2/3/03</u></p> <p><u>3/6/03</u></p> </div> </div>					
(*) The facility signature is not applicable for NRC-developed tests					
(#) Independent NRC reviewer initial items in column "C". Chief Examiner concurrence required.					

Facility: Indian Point Unit 3		Date of Exam: 3/17/2003		Scenario Numbers: 1 / 2 / 3		Operating Test No.: 1	
QUALITATIVE ATTRIBUTES					Initials		
					a	b	c
1.	The initial conditions are realistic, in that some equipment and/or instrumentation may be out of service, but it does not cue the operators into expected events.				JBA	JBA	TF
2.	The scenarios consist mostly of related events.				JBA	JBA	TF
3.	Each event description consists of <ul style="list-style-type: none"> the point in the scenario when it is to be initiated the malfunction(s) that are entered to initiate the event the symptoms/cues that will be visible to the crew the expected operator actions (by shift position) the event termination point (if applicable) 				JBA	JBA	TF
4.	No more than one non-mechanistic failure (e.g., pipe break) is incorporated into the scenario without a credible preceding incident such as a seismic event.				JBA	JBA	TF
5.	The events are valid with regard to physics and thermodynamics.				JBA	JBA	TF
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.				JBA	JBA	TF
7.	If time compression techniques are used, the scenario summary clearly so indicates. Operators have sufficient time to carry out expected activities without undue time constraints. Cues are given.				N/A	N/A	N/A
8.	The simulator modeling is not altered.				JBA	JBA	TF
9.	The scenarios have been validated. Any open simulator performance deficiencies have been evaluated to ensure that functional fidelity is maintained while running the planned scenarios.				JBA	JBA	TF
10.	Every operator will be evaluated using at least one new or significantly modified scenario. All other scenarios have been altered in accordance with Section D.4 of ES-301.				JBA	JBA	TF
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).				JBA	JBA	TF
12.	Each applicant will be significantly involved in the minimum number of transients and events specified on Form ES-301-5 (submit the form with the simulator scenarios).				JBA	JBA	TF
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.				JBA	JBA	TF
TARGET QUANTITATIVE ATTRIBUTES (PER SCENARIO; SEE SECTION D.4.D)					Actual Attributes		
					--	--	--
1.	Total malfunctions (5-8)	7	5	6	JBA	JBA	TF
2.	Malfunctions after EOP entry (1-2)	2	1	2	JBA	JBA	TF
3.	Abnormal events (2-4)	3	3	3	JBA	JBA	TF
4.	Major transients (1-2)	1	1	1	JBA	JBA	TF
5.	EOPs entered/requiring substantive actions (1-2)	2	3	2	JBA	JBA	TF
6.	EOP contingencies requiring substantive actions (0-2)	1	0	1	JBA	JBA	TF
7.	Critical tasks (2-3)	2	2	2	JBA	JBA	TF

Facility: IP3	Date of Exam 3/17/2003	Scenario Numbers: 4 / 5 /	Operating Test No.: 1		
QUALITATIVE ATTRIBUTES			Initials		
			a	b	c
1.	The initial conditions are realistic, in that some equipment and/or instrumentation may be out of service, but it does not cue the operators into expected events.		JAS	JAS	TF
2.	The scenarios consist mostly of related events.		JAS	JAS	TF
3.	Each event description consists of <ul style="list-style-type: none"> the point in the scenario when it is to be initiated the malfunction(s) that are entered to initiate the event the symptoms/cues that will be visible to the crew the expected operator actions (by shift position) the event termination point (if applicable) 		JAS	JAS	TF
4.	No more than one non-mechanistic failure (e.g., pipe break) is incorporated into the scenario without a credible preceding incident such as a seismic event.		JAS	JAS	TF
5.	The events are valid with regard to physics and thermodynamics.		JAS	JAS	TF
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.		JAS	JAS	TF
7.	If time compression techniques are used, the scenario summary clearly so indicates. Operators have sufficient time to carry out expected activities without undue time constraints. Cues are given.		N/A	N/A	N/A
8.	The simulator modeling is not altered.		JAS	JAS	TF
9.	The scenarios have been validated. Any open simulator performance deficiencies have been evaluated to ensure that functional fidelity is maintained while running the planned scenarios.		JAS	JAS	TF
10.	Every operator will be evaluated using at least one new or significantly modified scenario. All other scenarios have been altered in accordance with Section D.4 of ES-301.		JAS	JAS	TF
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).		JAS	JAS	TF
12.	Each applicant will be significantly involved in the minimum number of transients and events specified on Form ES-301-5 (submit the form with the simulator scenarios).		JAS	JAS	TF
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.		JAS	JAS	TF
TARGET QUANTITATIVE ATTRIBUTES (PER SCENARIO; SEE SECTION D.4.D)		Actual Attributes			
				--	--
1.	Total malfunctions (5-8)	6	5	JAS	TF
2.	Malfunctions after EOP entry (1-2)	2	2	JAS	TF
3.	Abnormal events (2-4)	3	2	JAS	TF
4.	Major transients (1-2)	1	1	JAS	TF
5.	EOPs entered/requiring substantive actions (1-2)	2	2	JAS	TF
6.	EOP contingencies requiring substantive actions (0-2)	1	0	JAS	TF
7.	Critical tasks (2-3)	2	2	JAS	TF

OPERATING TEST NO.: RO-1

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2	3	4
RO/PO	Reactivity	1	N/A	1		
	Normal	1	1	N/A		
	Instrument/Component	4	3,4,7	2,4		
	Major	1	5	5		
As RO or PO	Reactivity	1				
	Normal	0				
	Instrument/Component	2				
	Major	1				
SRO-I	Reactivity	0				
	Normal	1				
	Instrument/Component	2				
	Major	1				
As SRO	Reactivity	0				
	Normal	1				
	Instrument/Component	2				
	Major	1				
SRO-U	Reactivity	0				
	Normal	1				
	Instrument/Component	2				
	Major	1				

- Instructions:
- (1) Enter the operating test number and Form ES-D-1 event numbers for each evolution type.
 - (2) Reactivity manipulations may be conducted under normal or *controlled abnormal* conditions (refer to Section D.4.d) but must be significant per Section C.2.a of Appendix D.
 - (3) Whenever practical, both instrument and component malfunctions should be included; only those that require verifiable actions that provide insight to the applicant's competence count toward the minimum requirement.

Author:

Chief Examiner:

[Signature]
[Signature]

OPERATING TEST NO.: RO-2

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2	3	4
RO/PO	Reactivity	1	N/A	1		
	Normal	1	1	N/A		
	Instrument/Component	4	3,4,7	2,4		
	Major	1	5	5		
As RO or PO	Reactivity	1				
	Normal	0				
	Instrument/Component	2				
	Major	1				
SRO-I						
As SRO	Reactivity	0				
	Normal	1				
	Instrument/Component	2				
	Major	1				
SRO-U	Reactivity	0				
	Normal	1				
	Instrument/Component	2				
	Major	1				

- Instructions:
- (1) Enter the operating test number and Form ES-D-1 event numbers for each evolution type.
 - (2) Reactivity manipulations may be conducted under normal or *controlled abnormal* conditions (refer to Section D.4.d) but must be significant per Section C.2.a of Appendix D.
 - (3) Whenever practical, both instrument and component malfunctions should be included; only those that require verifiable actions that provide insight to the applicant's competence count toward the minimum requirement.

Author:

Chief Examiner:

[Signature]
[Signature]

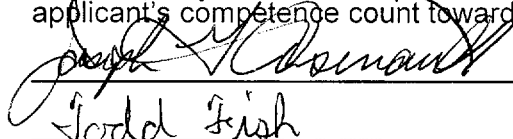
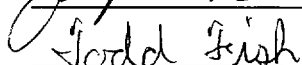
OPERATING TEST NO.: RO-3

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2	3	4
RO/PO	Reactivity	1	N/A		1	
	Normal	1	1		N/A	
	Instrument/ Component	4	3,4,7		2,3,7	
	Major	1	5		5	
As RO or PO	Reactivity	1				
	Normal	0				
	Instrument/ Component	2				
	Major	1				
SRO-I						
As SRO	Reactivity	0				
	Normal	1				
	Instrument/ Component	2				
	Major	1				
SRO-U	Reactivity	0				
	Normal	1				
	Instrument/ Component	2				
	Major	1				

- Instructions:
- (1) Enter the operating test number and Form ES-D-1 event numbers for each evolution type.
 - (2) Reactivity manipulations may be conducted under normal or *controlled abnormal* conditions (refer to Section D.4.d) but must be significant per Section C.2.a of Appendix D.
 - (3) Whenever practical, both instrument and component malfunctions should be included; only those that require verifiable actions that provide insight to the applicant's competence count toward the minimum requirement.

Author:

Chief Examiner:

OPERATING TEST NO.: RO-4

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2	3	4
RO/PO	Reactivity	1	N/A		1	
	Normal	1	1		N/A	
	Instrument/ Component	4	3,4,7		2,3,7	
	Major	1	5		5	
As RO or PO	Reactivity	1				
	Normal	0				
	Instrument/ Component	2				
	Major	1				
SRO-I						
As SRO	Reactivity	0				
	Normal	1				
	Instrument/ Component	2				
	Major	1				
SRO-U	Reactivity	0				
	Normal	1				
	Instrument/ Component	2				
	Major	1				

- Instructions:
- (1) Enter the operating test number and Form ES-D-1 event numbers for each evolution type.
 - (2) Reactivity manipulations may be conducted under normal or *controlled abnormal* conditions (refer to Section D.4.d) but must be significant per Section C.2.a of Appendix D.
 - (3) Whenever practical, both instrument and component malfunctions should be included; only those that require verifiable actions that provide insight to the applicant's competence count toward the minimum requirement.

Author:

Chief Examiner:

[Signature]
[Signature]

OPERATING TEST NO.: SROI-1

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2	3	4
RO/PO	Reactivity	1				
	Normal	1				
	Instrument/ Component	4				
	Major	1				
As RO or PO SRO-I As SRO	Reactivity	1	1			
	Normal	0	N/A			
	Instrument/ Component	2	2,3,4, 6			
	Major	1	5			
	Reactivity	0		N/A		
	Normal	1		1		
	Instrument/ Component	2		2,3,4		
	Major	1		5		
SRO-U	Reactivity	0				
	Normal	1				
	Instrument/ Component	2				
	Major	1				

- Instructions:
- (1) Enter the operating test number and Form ES-D-1 event numbers for each evolution type.
 - (2) Reactivity manipulations may be conducted under normal or *controlled abnormal* conditions (refer to Section D.4.d) but must be significant per Section C.2.a of Appendix D.
 - (3) Whenever practical, both instrument and component malfunctions should be included; only those that require verifiable actions that provide insight to the applicant's competence count toward the minimum requirement.

Author:

Chief Examiner:

[Signature]
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OPERATING TEST NO.: SROI-2

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2	3	4
RO/PO	Reactivity	1				
	Normal	1				
	Instrument/Component	4				
	Major	1				
As RO or PO	Reactivity	1	1			
	Normal	0	N/A			
	Instrument/Component	2	2,3,4,6			
	Major	1	5			
SRO-I						
As SRO	Reactivity	0		N/A		
	Normal	1		1		
	Instrument/Component	2		2,3,4		
	Major	1		5		
SRO-U	Reactivity	0				
	Normal	1				
	Instrument/Component	2				
	Major	1				

- Instructions:
- (1) Enter the operating test number and Form ES-D-1 event numbers for each evolution type.
 - (2) Reactivity manipulations may be conducted under normal or *controlled abnormal* conditions (refer to Section D.4.d) but must be significant per Section C.2.a of Appendix D.
 - (3) Whenever practical, both instrument and component malfunctions should be included; only those that require verifiable actions that provide insight to the applicant's competence count toward the minimum requirement.

Author:

Chief Examiner:

Joseph J. Holman
Todd Fish


OPERATING TEST NO.: SROI-3

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2	3	4
RO/PO	Reactivity	1				
	Normal	1				
	Instrument/Component	4				
	Major	1				
As RO or PO SRO-I As SRO	Reactivity	1	1			
	Normal	0	N/A			
	Instrument/Component	2	2,3,4,6			
	Major	1	5			
	Reactivity	0			N/A	
	Normal	1			1	
	Instrument/Component	2			2,3,4,6,7	
	Major	1			5	
SRO-U	Reactivity	0				
	Normal	1				
	Instrument/Component	2				
	Major	1				

- Instructions:
- (1) Enter the operating test number and Form ES-D-1 event numbers for each evolution type.
 - (2) Reactivity manipulations may be conducted under normal or *controlled abnormal* conditions (refer to Section D.4.d) but must be significant per Section C.2.a of Appendix D.
 - (3) Whenever practical, both instrument and component malfunctions should be included; only those that require verifiable actions that provide insight to the applicant's competence count toward the minimum requirement.

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Chief Examiner:



Todd Fish

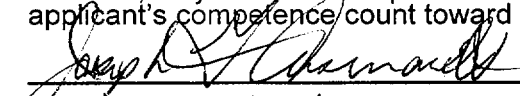
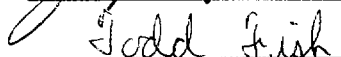
OPERATING TEST NO.: SROI-4

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2	3	4
RO/PO	Reactivity	1				
	Normal	1				
	Instrument/Component	4				
	Major	1				
As RO or PO	Reactivity	1	1			
	Normal	0	N/A			
	Instrument/Component	2	2,3,4,6			
	Major	1	5			
SRO-I						
As SRO	Reactivity	0			N/A	
	Normal	1			1	
	Instrument/Component	2			2,3,4,6,7	
	Major	1			5	
SRO-U	Reactivity	0				
	Normal	1				
	Instrument/Component	2				
	Major	1				

- Instructions:
- (1) Enter the operating test number and Form ES-D-1 event numbers for each evolution type.
 - (2) Reactivity manipulations may be conducted under normal or *controlled abnormal* conditions (refer to Section D.4.d) but must be significant per Section C.2.a of Appendix D.
 - (3) Whenever practical, both instrument and component malfunctions should be included; only those that require verifiable actions that provide insight to the applicant's competence count toward the minimum requirement.

Author:

Chief Examiner:

OPERATING TEST NO.: SROI-5

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2	3	4
RO/PO	Reactivity	1				
	Normal	1				
	Instrument/Component	4				
	Major	1				
As RO or PO	Reactivity	1		1		
	Normal	0		N/A		
	Instrument/Component	2		2,4		
	Major	1		5		
SRO-I	Reactivity	0			N/A	
	Normal	1			1	
	Instrument/Component	2			2,3,4,6,7	
	Major	1			5	
SRO-U	Reactivity	0				
	Normal	1				
	Instrument/Component	2				
	Major	1				

- Instructions:
- (1) Enter the operating test number and Form ES-D-1 event numbers for each evolution type.
 - (2) Reactivity manipulations may be conducted under normal or *controlled abnormal* conditions (refer to Section D.4.d) but must be significant per Section C.2.a of Appendix D.
 - (3) Whenever practical, both instrument and component malfunctions should be included; only those that require verifiable actions that provide insight to the applicant's competence count toward the minimum requirement.

Author:

Chief Examiner:

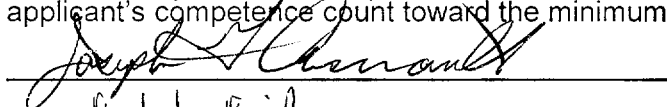
Joseph A. Howard
Todd Fish

OPERATING TEST NO.: SROI-6

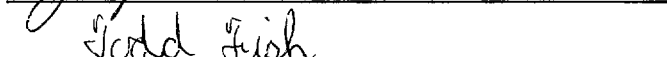
Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2	3	4
RO/PO	Reactivity	1				
	Normal	1				
	Instrument/Component	4				
	Major	1				
As RO or PO SRO-I As SRO	Reactivity	1			1	
	Normal	0			N/A	
	Instrument/Component	2			2,3,7	
	Major	1			5	
	Reactivity	0				N/A
	Normal	1				1
	Instrument/Component	2				2,3,5,8
	Major	1				6
SRO-U	Reactivity	0				
	Normal	1				
	Instrument/Component	2				
	Major	1				

- Instructions:
- (1) Enter the operating test number and Form ES-D-1 event numbers for each evolution type.
 - (2) Reactivity manipulations may be conducted under normal or *controlled abnormal* conditions (refer to Section D.4.d) but must be significant per Section C.2.a of Appendix D.
 - (3) Whenever practical, both instrument and component malfunctions should be included; only those that require verifiable actions that provide insight to the applicant's competence count toward the minimum requirement.

Author:



Chief Examiner:



OPERATING TEST NO.: SROI-7

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2	3	4
RO/PO	Reactivity	1				
	Normal	1				
	Instrument/Component	4				
	Major	1				
As RO or PO SRO-I As SRO	Reactivity	1				1
	Normal	0				N/A
	Instrument/Component	2				3,5,7
	Major	1				6
	Reactivity	0		N/A		
	Normal	1		1		
	Instrument/Component	2		2,3,4		
	Major	1		5		
SRO-U	Reactivity	0				
	Normal	1				
	Instrument/Component	2				
	Major	1				

- Instructions:
- (1) Enter the operating test number and Form ES-D-1 event numbers for each evolution type.
 - (2) Reactivity manipulations may be conducted under normal or *controlled abnormal* conditions (refer to Section D.4.d) but must be significant per Section C.2.a of Appendix D.
 - (3) Whenever practical, both instrument and component malfunctions should be included; only those that require verifiable actions that provide insight to the applicant's competence count toward the minimum requirement.

Author:

Chief Examiner:

[Signature]
[Signature]

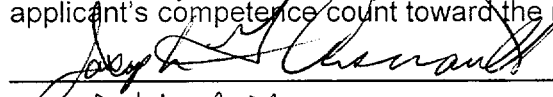

OPERATING TEST NO.: SROI-8

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2	3	4
RO/PO	Reactivity	1				
	Normal	1				
	Instrument/ Component	4				
	Major	1				
As RO or PO	Reactivity	1		1		
	Normal	0		N/A		
	Instrument/ Component	2		2,4		
	Major	1		5		
SRO-I						
As SRO	Reactivity	0			N/A	
	Normal	1			1	
	Instrument/ Component	2			2,3,4, 6,7	
	Major	1			5	
SRO-U	Reactivity	0				
	Normal	1				
	Instrument/ Component	2				
	Major	1				

- Instructions:
- (1) Enter the operating test number and Form ES-D-1 event numbers for each evolution type.
 - (2) Reactivity manipulations may be conducted under normal or *controlled abnormal* conditions (refer to Section D.4.d) but must be significant per Section C.2.a of Appendix D.
 - (3) Whenever practical, both instrument and component malfunctions should be included; only those that require verifiable actions that provide insight to the applicant's competence count toward the minimum requirement.

Author:

Chief Examiner:

OPERATING TEST NO.: SROI-9

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2	3	4
RO/PO	Reactivity	1				
	Normal	1				
	Instrument/Component	4				
	Major	1				
As RO or PO SRO-I As SRO	Reactivity	1			1	
	Normal	0			N/A	
	Instrument/Component	2			2,3,7	
	Major	1			5	
	Reactivity	0				N/A
	Normal	1				1
	Instrument/Component	2				2,3,5,8
	Major	1				6
SRO-U	Reactivity	0				
	Normal	1				
	Instrument/Component	2				
	Major	1				

- Instructions:
- (1) Enter the operating test number and Form ES-D-1 event numbers for each evolution type.
 - (2) Reactivity manipulations may be conducted under normal or *controlled abnormal* conditions (refer to Section D.4.d) but must be significant per Section C.2.a of Appendix D.
 - (3) Whenever practical, both instrument and component malfunctions should be included; only those that require verifiable actions that provide insight to the applicant's competence count toward the minimum requirement.

Author:

Chief Examiner:

[Signature]
[Signature]

OPERATING TEST NO.: SROU-1

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2	3	4
RO/PO	Reactivity	1				
	Normal	1				
	Instrument/ Component	4				
	Major	1				
As RO or PO SRO-I As SRO	Reactivity	1				
	Normal	0				
	Instrument/ Component	2				
	Major	1				
	Reactivity	0				
	Normal	1				
	Instrument/ Component	2				
	Major	1				
SRO-U	Reactivity	0	N/A			
	Normal	1	1			
	Instrument/ Component	2	2,3, 4,6			
	Major	1	5			

- Instructions:
- (1) Enter the operating test number and Form ES-D-1 event numbers for each evolution type.
 - (2) Reactivity manipulations may be conducted under normal or *controlled abnormal* conditions (refer to Section D.4.d) but must be significant per Section C.2.a of Appendix D.
 - (3) Whenever practical, both instrument and component malfunctions should be included; only those that require verifiable actions that provide insight to the applicant's competence count toward the minimum requirement.

Author:

Chief Examiner:

[Signature]
[Signature]

OPERATING TEST NO.: SROU-2

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2	3	4
RO/PO	Reactivity	1				
	Normal	1				
	Instrument/Component	4				
	Major	1				
As RO or PO	Reactivity	1				
	Normal	0				
	Instrument/Component	2				
	Major	1				
SRO-I						
As SRO	Reactivity	0				
	Normal	1				
	Instrument/Component	2				
	Major	1				
SRO-U	Reactivity	0	N/A			
	Normal	1	1			
	Instrument/Component	2	2,3,4,6			
	Major	1	5			

- Instructions:
- (1) Enter the operating test number and Form ES-D-1 event numbers for each evolution type.
 - (2) Reactivity manipulations may be conducted under normal or *controlled abnormal* conditions (refer to Section D.4.d) but must be significant per Section C.2.a of Appendix D.
 - (3) Whenever practical, both instrument and component malfunctions should be included; only those that require verifiable actions that provide insight to the applicant's competence count toward the minimum requirement.

Author:

Chief Examiner:

Joseph J. Chennault
Todd Fish

OPERATING TEST NO.: SROU-3

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2	3	4
RO/PO	Reactivity	1				
	Normal	1				
	Instrument/ Component	4				
	Major	1				
As RO or PO SRO-I As SRO	Reactivity	1				
	Normal	0				
	Instrument/ Component	2				
	Major	1				
	Reactivity	0				
	Normal	1				
	Instrument/ Component	2				
	Major	1				
SRO-U	Reactivity	0	N/A			
	Normal	1	1			
	Instrument/ Component	2	2,3, 4,6			
	Major	1	5			

- Instructions:
- (1) Enter the operating test number and Form ES-D-1 event numbers for each evolution type.
 - (2) Reactivity manipulations may be conducted under normal or *controlled abnormal* conditions (refer to Section D.4.d) but must be significant per Section C.2.a of Appendix D.
 - (3) Whenever practical, both instrument and component malfunctions **should be** included; only those that require verifiable actions that provide **insight to the** applicant's competence count toward the minimum requirement.

Author:

Chief Examiner:

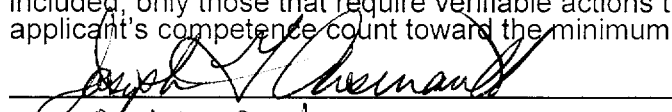

OPERATING TEST NO.: SROU-4

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2	3	4
RO/PO	Reactivity	1				
	Normal	1				
	Instrument/ Component	4				
	Major	1				
As RO or PO	Reactivity	1				
	Normal	0				
	Instrument/ Component	2				
	Major	1				
SRO-I	Reactivity	0				
	Normal	1				
	Instrument/ Component	2				
	Major	1				
SRO-U	Reactivity	0	N/A			
	Normal	1	1			
	Instrument/ Component	2	2,3, 4,6			
	Major	1	5			

- Instructions:
- (1) Enter the operating test number and Form ES-D-1 event numbers for each evolution type.
 - (2) Reactivity manipulations may be conducted under normal or *controlled abnormal* conditions (refer to Section D.4.d) but must be significant per Section C.2.a of Appendix D.
 - (3) Whenever practical, both instrument and component malfunctions **should be** included; only those that require verifiable actions that provide insight to the applicant's competence count toward the minimum requirement.

Author:

Chief Examiner:

OPERATING TEST NO.: SROU-5

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2	3	4
RO/PO	Reactivity	1				
	Normal	1				
	Instrument/Component	4				
	Major	1				
As RO or PO	Reactivity	1				
	Normal	0				
	Instrument/Component	2				
	Major	1				
SRO-I	Reactivity	0				
	Normal	1				
	Instrument/Component	2				
	Major	1				
As SRO	Reactivity	0				
	Normal	1				
	Instrument/Component	2				
	Major	1				
SRO-U	Reactivity	0		N/A		
	Normal	1		1		
	Instrument/Component	2		2,3,4		
	Major	1		5		

- Instructions:
- (1) Enter the operating test number and Form ES-D-1 event numbers for each evolution type.
 - (2) Reactivity manipulations may be conducted under normal or *controlled abnormal* conditions (refer to Section D.4.d) but must be significant per Section C.2.a of Appendix D.
 - (3) Whenever practical, both instrument and component malfunctions should be included; only those that require verifiable actions that provide insight to the applicant's competence count toward the minimum requirement.

Author:

Chief Examiner:

Joseph J. Greenault
David Fish

CREW A Competencies	SROU-1				SROI-1				RO-1			
	SCENARIO				SCENARIO				SCENARIO			
	1 CRS	2	3	4	1 RO	2 CRS	3	4	1 BOP	2 RO	3	4
Understand and Interpret Annunciators and Alarms	2,3,4 ,5				2,3,5	2,3,4 ,5,6			4,5,9	2,5,6		
Diagnose Events and Conditions	2,3,4 ,5,9				2,3,4 ,5,6	2,3,4 ,5,6			4,5,7 ,8,9	2,5,6		
Understand Plant and System Response	2,3,4 ,5				2,3,4 ,5,6	2,3,4 ,5,6			4,5,9	2,4,6		
Comply With and Use Procedures (1)	1,2,3 ,4,5, 9				1,3,4	1-6			3,4,7 ,9	1,2,5 ,6		
Operate Control Boards (2)	N/A				1,2,3 ,4,5, 6	N/A			1,3,4 ,7	1,2,5 ,6		
Communicate and Interact With the Crew	ALL				1,2,3 ,4,5	ALL			1,3,4 ,7,9	1,2,5 ,6		
Demonstrate Supervisory Ability (3)	ALL				N/A	ALL			N/A	N/A		
Comply With and Use Tech. Specs. (3)	3				N/A	2			N/A	N/A		
Notes: (1) Includes Technical Specification compliance for an RO. (2) Optional for an SRO-U. (3) Only applicable to SROs.												

Instructions:

Circle the applicant's license type and enter one or more event numbers that will allow the examiners to evaluate every applicable competency for every applicant.

Author:

Chief Examiner:

Joseph J. Chisnault
Todd Fish

CREW B Competencies	SROU-2				SROI-2				RO-2			
	SCENARIO				SCENARIO				SCENARIO			
	1 CRS	2	3	4	1 RO	2 CRS	3	4	1 BOP	2 RO	3	4
Understand and Interpret Annunciators and Alarms	2,3,4 ,5				2,3,5	2,3,4 ,5,6			4,5,9	2,5,6		
Diagnose Events and Conditions	2,3,4 ,5,9				2,3,4 ,5,6	2,3,4 ,5,6			4,5,7 ,8,9	2,5,6		
Understand Plant and System Response	2,3,4 ,5				2,3,4 ,5,6	2,3,4 ,5,6			4,5,9	2,4,6		
Comply With and Use Procedures (1)	1,2,3 ,4,5, 9				1,3,4	1-6			3,4,7 ,9	1,2,5 ,6		
Operate Control Boards (2)	N/A				1,2,3 ,4,5, 6	N/A			1,3,4 ,7	1,2,5 ,6		
Communicate and Interact With the Crew	ALL				1,2,3 ,4,5	ALL			1,3,4 ,7,9	1,2,5 ,6		
Demonstrate Supervisory Ability (3)	ALL				N/A	ALL			N/A	N/A		
Comply With and Use Tech. Specs. (3)	3				N/A	2			N/A	N/A		
Notes: (1) Includes Technical Specification compliance for an RO. (2) Optional for an SRO-U. (3) Only applicable to SROs.												

Instructions:

Circle the applicant's license type and enter one or more event numbers that will allow the examiners to evaluate every applicable competency for every applicant.

Author:

Chief Examiner:

Joseph J. Brennan
Judd Fish

CREW C Competencies	SROU-3				SROI-3				RO-3			
	SCENARIO				SCENARIO				SCENARIO			
	1 CRS	2	3	4	1 RO	2	3 CRS	4	1 BOP	2	3 RO	4
Understand and Interpret Annunciators and Alarms	2,3,4 ,5				2,3,5		2,3,4 ,6		4,5,9		2,3	
Diagnose Events and Conditions	2,3,4 ,5,9				2,3,4 ,5,6		2,3,4 ,5,6, 7		4,5,7 ,8,9		2,3,7	
Understand Plant and System Response	2,3,4 ,5				2,3,4 ,5,6		2,3,4 ,5,6, 7		4,5,9		2,3,7	
Comply With and Use Procedures (1)	1,2,3 ,4,5, 9				1,3,4		1-7		3,4,7 ,9		1,2,3 ,5,7	
Operate Control Boards (2)	N/A				1,2,3 ,4,5, 6		N/A		1,3,4 ,7		1,2,3 ,4,5, 7	
Communicate and Interact With the Crew	ALL				1,2,3 ,4,5		ALL		1,3,4 ,7,9		1,2,3 ,4,5, 7	
Demonstrate Supervisory Ability (3)	ALL				N/A		ALL		N/A		N/A	
Comply With and Use Tech. Specs. (3)	3				N/A		2-4		N/A		N/A	
Notes: (1) Includes Technical Specification compliance for an RO. (2) Optional for an SRO-U. (3) Only applicable to SROs.												

Instructions:

Circle the applicant's license type and enter one or more event numbers that will allow the examiners to evaluate every applicable competency for every applicant.

Author:

Chief Examiner:

Joseph L. Hernandez
Todd Fish

CREW D Competencies	SROU-4				SROI-4				RO-4			
	SCENARIO				SCENARIO				SCENARIO			
	1 CRS	2	3	4	1 RO	2	3 CRS	4	1 BOP	2	3 RO	4
Understand and Interpret Annunciators and Alarms	2,3,4,5				2,3,5		2,3,4,6		4,5,9		2,3	
Diagnose Events and Conditions	2,3,4,5,9				2,3,4,5,6		2,3,4,5,6,7		4,5,7,8,9		2,3,7	
Understand Plant and System Response	2,3,4,5				2,3,4,5,6		2,3,4,5,6,7		4,5,9		2,3,7	
Comply With and Use Procedures (1)	1,2,3,4,5,9				1,3,4		1-7		3,4,7,9		1,2,3,5,7	
Operate Control Boards (2)	N/A				1,2,3,4,5,6		N/A		1,3,4,7		1,2,3,4,5,7	
Communicate and Interact With the Crew	ALL				1,2,3,4,5		ALL		1,3,4,7,9		1,2,3,4,5,7	
Demonstrate Supervisory Ability (3)	ALL				N/A		ALL		N/A		N/A	
Comply With and Use Tech. Specs. (3)	3				N/A		2-4		N/A		N/A	
Notes: (1) Includes Technical Specification compliance for an RO. (2) Optional for an SRO-U. (3) Only applicable to SROs.												

Instructions:

Circle the applicant's license type and enter one or more event numbers that will allow the examiners to evaluate every applicable competency for every applicant.

Author:

Chief Examiner:

Joseph J. Chrenault
Stodd Fish

CREW E Competencies	SROU-5				SROI-5				SROI-6			
	SCENARIO				SCENARIO				SCENARIO			
	1	2 CRS	3	4	1	2 RO	3 CRS	4	1	2	3 RO	4 CRS
Understand and Interpret Annunciators and Alarms		2,3,4 ,5,6				2,5,6	2,3,4 ,6				2,3	2,3,4 ,5,6
Diagnose Events and Conditions		2,3,4 ,5,6				2,5,6	2,3,4 ,5,6, 7				2,3,7	2,3,4 ,5,6, 8
Understand Plant and System Response		2,3,4 ,5,6				2,4,6	2,3,4 ,5,6, 7				2,3,7	2,3,4 ,5,6, 7,8
Comply With and Use Procedures (1)		1-6				1,2,4 ,6	1-7				1,2,3 ,5,7	1-8
Operate Control Boards (2)		N/A				1,2,5 ,6	N/A				1,2,3 ,4,5, 7	N/A
Communicate and Interact With the Crew		ALL				1,2,5 ,6	ALL				1,2,3 ,4,5, 7	ALL
Demonstrate Supervisory Ability (3)		ALL				N/A	ALL				N/A	ALL
Comply With and Use Tech. Specs. (3)		2				N/A	2-4				N/A	4
Notes: (1) Includes Technical Specification compliance for an RO. (2) Optional for an SRO-U. (3) Only applicable to SROs.												

Instructions:

Circle the applicant's license type and enter one or more event numbers that will allow the examiners to evaluate every applicable competency for every applicant.

Author:

Chief Examiner:

Joseph F. Chisnall
David Fish

CREW F Competencies	SROI-7				SROI-8				SROI-9			
	SCENARIO				SCENARIO				SCENARIO			
	1	2 CRS	3	4 RO	1	2 RO	3 CRS	4	1	2	3 RO	4 CRS
Understand and Interpret Annunciators and Alarms		2,3,4 ,5,6		2,3,5 ,6		2,5,6	2,3,4 ,6				2,3	2,3,4 ,5,6
Diagnose Events and Conditions		2,3,4 ,5,6		2,3,5 ,6		2,5,6	2,3,4 ,5,6, 7				2,3,7	2,3,4 ,5,6, 8
Understand Plant and System Response		2,3,4 ,5,6		2,3,5 ,6,7, 8		2,4,6	2,3,4 ,5,6, 7				2,3,7	2,3,4 ,5,6, 7,8
Comply With and Use Procedures (1)		1-6		1,2,3 ,5,6, 7,8,		1,2,5 ,6	1-7				1,2,3 ,5,7	1-8
Operate Control Boards (2)		N/A		2,3,6 ,7,8		1,2,5 ,6	N/A				1,2,3 ,4,5, 7	N/A
Communicate and Interact With the Crew		ALL		1,2,3 ,5,6, 8		1,2,5 ,6	ALL				1,2,3 ,4,5, 7	ALL
Demonstrate Supervisory Ability (3)		ALL		N/A		N/A	ALL				N/A	ALL
Comply With and Use Tech. Specs. (3)		2		N/A		N/A	2-4				N/A	4
Notes: (1) Includes Technical Specification compliance for an RO. (2) Optional for an SRO-U. (3) Only applicable to SROs.												

Instructions:

Circle the applicant's license type and enter one or more event numbers that will allow the examiners to evaluate every applicable competency for every applicant.

Author:

Chief Examiner:

Joseph J. Chumant
Todd Fish

ES-401

Written Examination
Quality Checklist

Form ES-401-7

Facility: IP3		Date of Exam: 3/15/2003		Exam level: SRO		
Item Description	Initial					
	A	B*	C#			
1. Questions and answers technically accurate and applicable to the facility	RA	Y	TF			
2. All K/A's referenced for all questions Facility learning objectives referenced as available	RA	Y	TF			
3. R/SRO Overlap is no more than 75%, and SRO questions are appropriate per Section D.2.2 of ES-401	RA	Y	TF			
4. Question selection and duplication from the last 2 NRC licensing exams appears to be consistent with a systematic sampling process	RA	Y	TF			
5. Question duplication from the license screening/audit exam was controlled as indicated below (check the item that applies and appears appropriate): <ul style="list-style-type: none"> The audit exam was systematically and randomly developed; or The audit exam was completed before the license exam was started; or The examinations were developed independently; or The licensee certifies that there is no duplication; or Other (explain) 	RA	Y	TF			
6. Bank use meets limits (no more than 75% from the bank and at least 10 new, and the rest modified); enter the actual question distribution at right	Bank 53	Modified 18	New 29	RA	Y	TF
7. Between 50 and 60 percent of the questions on the exam (including 10 new questions) are written at the comprehension/analysis level; enter the actual question distribution on the right	Memory 40	C/A 60		RA	Y	TF
8. References/handouts do not give away answers	RA	Y	TF			
9. Question content conforms with specific K/A statements in the previously approved examination outline and is appropriate for the tier to which they are assigned; deviations are justified	RA	Y	TF			
10. Question psychometric quality and format meet ES, Appendix B, guidelines	RA	Y	TF			
11. The exam contains 100, one-point, multiple choice items; the total is correct and agrees with value on cover sheet	RA	Y	TF			
Printed Name/Signature		Date				
a. Author	JOSEPH G. ARSENAULT <i>Joseph Arsenault</i>		2/28/03			
b. Facility Reviewer (*)	STEPHEN P. JOUBERT <i>Stephen Joubert</i>		2/28/03			
c. Chief Examiner (#)	TODD FISH <i>Todd Fish</i>		3/6/03			
d. NRC Regional Supervisor	RJ Carter <i>RJ Carter</i>		3/6/03			
Note: * The facility reviewer's Initial/signature are not applicable for NRC-developed examinations # Independent NRC reviewer initial items in column 'c', Chief Examiner concurrence required						

NUREG-1021, Revision 8, Supplement 1

ES-401

Written Examination
Quality Checklist

Form ES-401-7

Facility: IP3		Date of Exam: 3/15/2003		Exam level: RO			
Item Description				Initial			
				A	B	C#	
1.	Questions and answers technically accurate and applicable to the facility			PA	J	TF	
2.	NRC K/As referenced for all questions Facility learning objectives referenced as available			PA	J	TF	
3.	NRC RO Overlap is no more than 75%, and SRO questions are appropriate per Section D.2.d of ES-401			PA	J	TF	
4.	Question selection and duplication from the last 2 NRC licensing exams appears to be consistent with a systematic sampling process			PA	J	TF	
5.	Question duplication from the license screening/audit exam was controlled as indicated below (check the item that applies and appears appropriate): <ul style="list-style-type: none"> The audit exam was systematically and randomly developed; or The audit exam was completed before the license exam was started; or The examinations were developed independently; or The licensee certifies that there is no duplication; or Other (explain) 			PA	J	TF	
6.	Bank uses meets limits (no more than 75% from the bank and at least 10 new, and the rest modified); enter the actual question distribution at right	Bank	Modified	New	PA	J	TF
		57	16	27			
7.	Between 50 and 60 percent of the questions on the exam (including 10 new questions) are written at the comprehension/analysis level; enter the actual question distribution on the right	Memory	C/A		PA	J	TF
		44	56				
8.	References/handouts do not give away answers				PA	J	TF
9.	Question content conforms with specific K/A statements in the previously approved examination outline and is appropriate for the tier to which they are assigned; deviations are justified				PA	J	TF
10.	Question psychometric quality and format meet ES, Appendix B, guidelines				PA	J	TF
11.	This exam contains 100, one-point, multiple choice items; the total is correct and agrees with value on cover sheet				PA	J	TF
<div style="display: flex; justify-content: space-between;"> <div>Printed Name/Signature</div> <div>Date</div> </div>							
a. Author	JOSEPH G. ARSENAULT <i>Joseph G. Arsenault</i>				2/28/03		
b. Facility Reviewer (*)	STEPHEN P. JOUBERT <i>Stephen P. Joubert</i>				2/28/03		
c. Chief Examiner (#)	TODD FISH <i>Todd Fish</i>				3/6/03		
d. NRC Regional Supervisor	R.J. Con te <i>R.J. Con te</i>				3/6/03		
<p>Note: * The facility reviewer's initial/signature are not applicable for NRC-developed examinations</p> <p># Independent NRC reviewer initial items in column 'c', Chief Examiner concurrence required</p>							

NUREG-1021, Revision 8, Supplement 1

Facility: <u>Livonia Plant 3</u>		Date of Exam: <u>3/21/03</u>		Exam Level: <u>RO/SRO</u>	
Item Description	Initials				
	a	b	c		
1. Answer key changes and question deletions justified and documented	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>		
2. Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)	<u>B</u>	<u>SMF</u>	<u>TF</u>		
3. Grading for all borderline cases (80% +/- 2%) reviewed in detail	<u>B</u>	<u>SMF</u>	<u>TF</u>		
4. All other failing examinations checked to ensure that grades are justified	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>		
5. Performance on missed questions checked for training deficiencies and wording problems; evaluate validity of questions missed by half or more of the applicants	<u>B</u>	<u>SMF</u>	<u>TF</u>		
Printed Name / Signature		Date			
a. Grader	<u>Thomas Stanley</u>	<u>3/24/03</u>			
b. Facility Reviewer(*)	<u>Tim Jenkins</u>	<u>3/24/03</u>			
c. NRC Chief Examiner (*)	<u>TOOD FISH / Todd Fish</u>	<u>4/1/03</u>			
d. NRC Supervisor (*)	<u>Richard J. Conkle</u>	<u>4/24/03</u>			
(*) The facility reviewer's signature is not applicable for examinations graded by the NRC; two independent NRC reviews are required.					